

***U.S. Patent Application of Kling et al., Serial No.: 10/049,147***  
***Amendment After Final Rejection and Request for Reconsideration – Art Unit 2644***

REMARKS

This Amendment is responsive to the final Office Action mailed July 14, 2005. The Examiner's comments in this Action have been carefully considered.

In the Action, claims 1-7 and 10 have been rejected, although it is noted that claims 11 and 12 have been allowed. Claims 1-7 and 10 have all been rejected as being obvious, and therefore unpatentable, on the basis of U.S. Patent No. 5,828,763 to Koyano et al. The actual rejections substantially follow the rejections made in the previous Action mailed December 20, 2004. However, in paragraph 4 of the present Action, the Examiner sets forth a response to the arguments previously filed by applicant. The Examiner does not deem the previous arguments persuasive.

One ground the Examiner uses to justify rejecting the claims based on Koyano et al. is that the applicant's recognition of "another advantage" would flow naturally from the suggestion of the prior art, which "cannot be the basis of patentability when the differences would otherwise be obvious." However, the Examiner concludes that to modify the teachings of Koyano et al. "would have been obvious to one of ordinary skill in the art," although the Examiner does not give any reason why he believes such modification would be obvious. The fact that it would be obvious to one of ordinary skill in the art to "compensate the phase shift of higher frequency audio signals with the frequency audio signals" by implementing a low pass filter does not appear to address the present invention and the claims of record. Claim 1, for example, clearly requires that such a compensation must be to a specific combination of speakers so that the low frequency tones emanating from both speakers have substantially the same phase, so that the low frequency tones emanating from one speaker have the same phase as the low frequency tones emanating from the

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other speaker. Further, claim 1 recites that, with such an arrangement, the low frequency tones that emanate from the loudspeakers reinforce each other and enhance the volumes of the low frequency tones. At page 5 of the Action, the Examiner points out that certain features that have been relied upon by applicant in his arguments “are not recited in the rejected claims.” The Examiner is understandably reluctant to read limitations from the specification into the claims.

However, it is respectfully submitted that claim 1, as previously filed, does recite the important feature mentioned. First, the claim requires that the outputs of at least two speakers are produced with the same phase so that the low frequency tones emanating from both speakers “reinforce each other and enhance the volumes” of said low frequency tones. Increasing the output volume of a speaker is, to one of ordinary skill in art, understood to require a larger-sized speaker with a larger-sized diaphragm that moves an increased amount of air. By having two speakers reinforce each other to provide enhanced volume – this would be clearly understood to one skilled in the art as the equivalent of utilizing a larger speaker with a larger volume to move more air – although the speakers actually used are smaller and simply output their audio in phase. Nevertheless, in order to more fully clarify this point, applicant has proposed by this Amendment some new functional language in the “whereby” clause, to make it clear that the reinforcement phase enhancing the volumes of low frequency tones permits the use of smaller-sized speakers for a desired volume output.

Koyano aims to distribute the sound waves in a uniform way in every direction from different loudspeakers. In his Fig. 8, there are two normal (standard) speakers 8, 9 and one tweeter 11 (also mentioned in the Abstract). In contrast, the subject invention aims, with the sole use of

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low-priced loudspeakers of the kind commonly produced by mass production and of equal size / capacity, to enlarge the membrane area for the radiation of low frequencies of an additional loudspeaker of equal size/capacity with a low-pass filter that therefore radiates only the low frequencies.

Koyano uses a phase shifter for achieve the abovementioned purpose. This phase shifter shifts the phase between 140° and 180°. The subject invention, on the other hand, uses a phase shifter for their own, distinct purposes – to produce equal phases of the low frequencies of all the loudspeakers used. The invention according to Koyano obtains a substantially uniform sound distributed in every direction, whereas the subject invention produces a radiation of sound in one single direction.

In sum, Koyano's invention and the subject invention have different technical objects and achieve varying success in their performance. They use different means to obtain their goals (high and low pass filters; equally sized filters in the one case and loudspeakers of varying sizes in the other). And they take different phase adjustments – in the case of Koyano, 140°–180°, in the subject invention, 0°.

On the basis of the foregoing, it is clear that Koyano does not in any way teach or even suggest the subject matter of the present invention and that the two inventions are completely patentably distinct. The modifications of the Koyano construction might be obvious to those skilled in the art, although the Examiner does not indicate why they would be so obvious and where the prior art provides the incentive to modify Koyano. Without an indication that the reference itself or the prior art in general would suggest or provide an incentive for making the desired modification, it

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is respectfully submitted that a rejection based on obviousness may be no more than a “hindsight reconstruction” on the basis of the claims being examined and the teachings contained in the subject application. Without the incentive to make the modification proposed by the Examiner, there is simply be no obvious motivation – absent the present invention – to make such modification(s).

Further, it is not clear that even if the Examiner’s proposed modifications were to be made, that they would result in the subject matter claimed in claim 1, especially as currently amended.

It is respectfully submitted that this application is now in condition for allowance. Allowed claim 12 has been amended simply to correct typographical and grammatical errors, and therefore should continue to be allowed. The subject amendment to claim 1 does not amend the claim in such a manner that would necessitate further consideration or search. Claim 1 has simply been amended to add some functional language in the “whereby” clause to clarify one benefit of the claimed loud-speaker combination. The structural details of this combination have all been previously claimed.

Entry of this Amendment and reconsideration and withdrawal of the final rejection is respectfully requested, if not to place the subject application in condition for allowance, at least to place it in better condition for appeal.

Early allowance and issuance is therefore respectfully solicited.

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Respectfully submitted,

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